

WHAT IS CLAIMED IS:

1. An apparatus for coupling a battery charger and/or battery tester to a battery, comprising:

a cable;

a first elongate clamp member having a first jaw end and a first hand grip end separated by a first pivot coupling, the first hand grip having a first hole formed therein;

a second elongate clamp member having a second jaw end and a second hand grip end separated by a second pivot coupling, the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings whereby the first and second jaws are generally aligned together;

a terminal electrically coupled to the cable having a terminal hole formed therein aligned with the first hole in the first hand grip; and

a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable.

2. The apparatus of claim 1 including a first electrical plug electrically coupled to the clamp and a second electrical plug electrically coupled to the

cable, the first and second plugs configured to removably electrically couple together.

3. The apparatus of claim 1, wherein the cable includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current.

4. The apparatus of claim 3, wherein the high current comprises a charging current configured to charge the battery.

5. The apparatus of claim 1, wherein the cable includes a first electrical connector and a second electrical connector, wherein at least one of the first connector and the second connector provides a Kelvin connection capable of injecting a forcing function into the battery and measuring a voltage across the battery.

6. The apparatus of claim 5, wherein at least one of the first connector and the second connector provides a sensor lead for sensing a physical property of the battery.

7. The apparatus of claim 1 including a spring coupled to the first and second elongate clamp members configured to urge the first and second jaws together to a closed position.

8. The apparatus of claim 1, wherein the first hand grip and the second hand grip are covered with an insulating material.

9. The apparatus of claim 1, wherein the terminal comprises a tin-plated ring.

10. The apparatus of claim 1, wherein the replaceable fastener comprises a nut and bolt.

11. An apparatus for coupling a battery charger or battery tester to a battery, comprising:

- a cable;

- a first elongate clamp member having a first jaw end and a first hand grip end separated by a first pivot coupling, the first hand grip having a first hole formed therein;

- a second elongate clamp member having a second jaw end and a second hand grip end separated by a second pivot coupling, the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings whereby the first and second jaws are generally aligned together;

- a first electrical plug coupled to the clamp;
- and

a second electrical plug coupled to the cable,  
wherein the first and second electrical  
plug removably electrically couple  
together.

12. The apparatus of claim 11, wherein the first plug is electrically coupled to the clamp through a first portion of a first electrical connector and a first portion of a second electrical connector.

13. The apparatus of claim 12, wherein the second plug is electrically coupled to the cable through a second portion of the first electrical connector and a second portion of the second electrical connector.

14. The apparatus of claim 13, wherein the first and second portions of the first electrical connector and the first and second portions of the second electrical connector are configured to removably electrically couple together through the first and second plugs.

15. The apparatus of claim 13, wherein one of the first and second electrical connectors includes two electrically isolated electrical contacts that provide a Kelvin connection.

16. The apparatus of claim 15, wherein one of the first and second electrical connectors comprise a sensor lead.

17. The apparatus of claim 13, wherein the first and second electrical connectors comprise acid-resistant connectors.

18. A method of coupling a battery charger and/or a battery tester to a battery, the method comprising:

providing a cable;  
providing a first elongate clamp member pivotally joined to a second elongate clamp member by first and second couplings, the first elongate clamp member having a first hole;  
providing a terminal electrically coupled to an end of the cable and having a terminal hole formed therein which aligns with the first hole in the first elongate clamp member; and  
removably fastening the terminal to the clamp member through the first hole and the terminal hole such that the clamp can be disconnected from the cable.

19. The method of claim 18 and further comprising:  
providing a first electrical plug electrically coupled to the clamp and a second electrical plug electrically coupled to the cable; and  
removably connecting the first electrical plug and the second electrical plug such that the first and second electrical plugs can be electrically disconnected from each other.

20. The method of claim 19, wherein removably connecting the first and second electrical plugs comprises:

electrically connecting a first portion of a first electrical connector from the first plug to the clamp and connecting a second portion of the first electrical connector from the second plug to the cable; and

electrically connecting a first portion of a second electrical connector from the second plug to the clamp and connecting a second portion of the second electrical connector from the second plug to the cable.

21. The method of claim 20, wherein the first electrical connector includes two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical connector comprises a sensor lead.

22. The method of claim 18, wherein providing the cable comprises providing a main electrical connector electrically coupled to the terminal and capable of carrying a high charging current.